

Main idea for disclosure [REDACTED] continued [REDACTED]

**Main Idea for Disclosure** [REDACTED]

Prepared for and/or by an IBM Attorney - IBM Confidential

Archived On: [REDACTED]

Title of disclosure (in English)

A method and system for easily identifying and distinguishing words contained within an e-mail message in order to convey significance

Idea of disclosure

1. Describe your invention, stating the problem solved (if appropriate), and indicating the advantages of using the invention.

The present invention is a method and system for easily identifying and distinguishing words contained within an e-mail message in order to convey significance to the recipient of the message. The present invention relates to creating and reading e-mail messages.

Background and the problem:

Currently, e-mail users receive upwards of 25 to 50 e-mail messages per day, especially a) those using e-mail in the work place and b) those e-mail users who are considered critical to a project or team. Many of those messages are addressed to more than one individual; that is, the author sends the exact same message to more than one recipient at the same time. In many situations, the author intends that certain parts of the message body are to be considered more significant or important by some of the recipients than they are for the others. Take for example, an author who sends a message to ten people (ten people on the To: line of the message) to notify them all of the existence of a certain problem, as well as ask specific questions of two of them and assign actions ("to dos") to two others. The problem is that all ten of the recipients must take the time to read through the entire message to see which areas are important to them, even if only a small section is applicable to them. Without reading the entire message, each recipient cannot easily see which areas they need to pay attention to and which are not important to them. In their haste to catch up on reading many e-mail messages each day, they can easily overlook a question or action that the sender of the message wrote in the message specifically for them and cause delays in progress of the situation.

Accordingly, what is needed is a system and method within e-mail programs that will minimize the time required to read e-mail messages by allowing certain words that are contained within the e-mail message to be quickly and easily identified and distinguished within the e-mail message from the rest of the words in the message. The system and method can be available at the time the message is created by the author or at the time the message is read by the recipient, and the words are ones that either the author or recipient can determined should convey significance.

Advantages of using the invention

Authors of e-mail messages can easily find terms in their messages for which they want to call attention to when read by the recipients and distinguish those terms so that they are readily visible to those particular recipients. This reduces the likelihood of a recipient overlooking something in the message that the author wants them to read.

Individual recipients of the e-mail messages can easily find those terms in the message that are important to each of them. This reduces the time each person spends reading their e-mail, as they can scan each message and easily find the pieces that are important to them.

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2. How does the invention solve the problem or achieve an advantage, (a description of "the invention", including figures inline as appropriate)?

Definitions of terms used herein:

"significant": Herein, significant means those words (which includes proper names, or words invented by the user of the invention) which the user considers would be important to read if they are contained that user's e-mail messages. For example, a manager would consider the names of his employees to be significant for e-mail messages that he sends or receives.

"distinct" and "distinguished": Herein, a term contained in an e-mail message is distinct if it has a quality that makes it stand out from the other terms in the e-mail message, and it is said to be distinguished from the rest of the text. For example, if most of the text in an e-mail message is in normal font and some terms are in bold font, those terms that are in bold font are "distinct" or "distinguished" from the rest of the text. Ways in which terms can be made distinct include but are not limited to: different font, different color, having an image displayed next to them.

High level description

To address the requirements described above, the present invention discloses a method that includes: collecting significant terms, locating those terms inside an e-mail message, and, within the message itself, distinguishing them from the other "non-significant" terms so that they can be quickly and easily identified. With this method:

1) E-mail authors define a set of terms (which can be words, proper names, invented words) that they want to be registered as significant terms. When finished composing an e-mail message, the authors invoke the invention which scans the e-mail message and locates the registered terms in the body of the message. For each occurrence of a registered term, the invention asks the author whether it should make that occurrence to appear distinct within the message.

and

2) E-mail recipients define a set of terms (which can be words, proper names, invented words) that they want to be registered as significant terms. When they open an e-mail message to be read, the recipients invoke the invention which scans the e-mail message, locates the registered terms in the body of the message, and makes the occurrences appear distinct within the message.

Flowchart

The following are flow charts illustrating preferred embodiments of the method described above, one for use by an e-mail author and the other for use by an e-mail recipient:

Figure 1, for e-mail author

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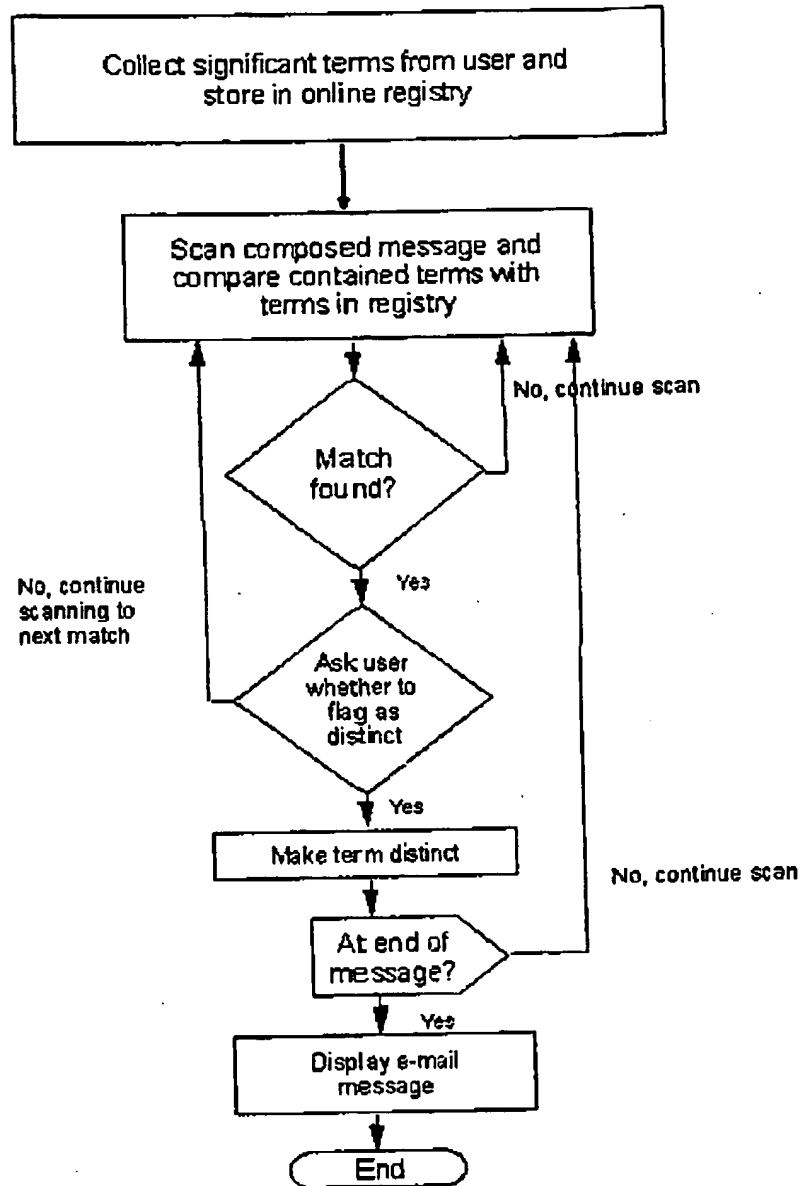
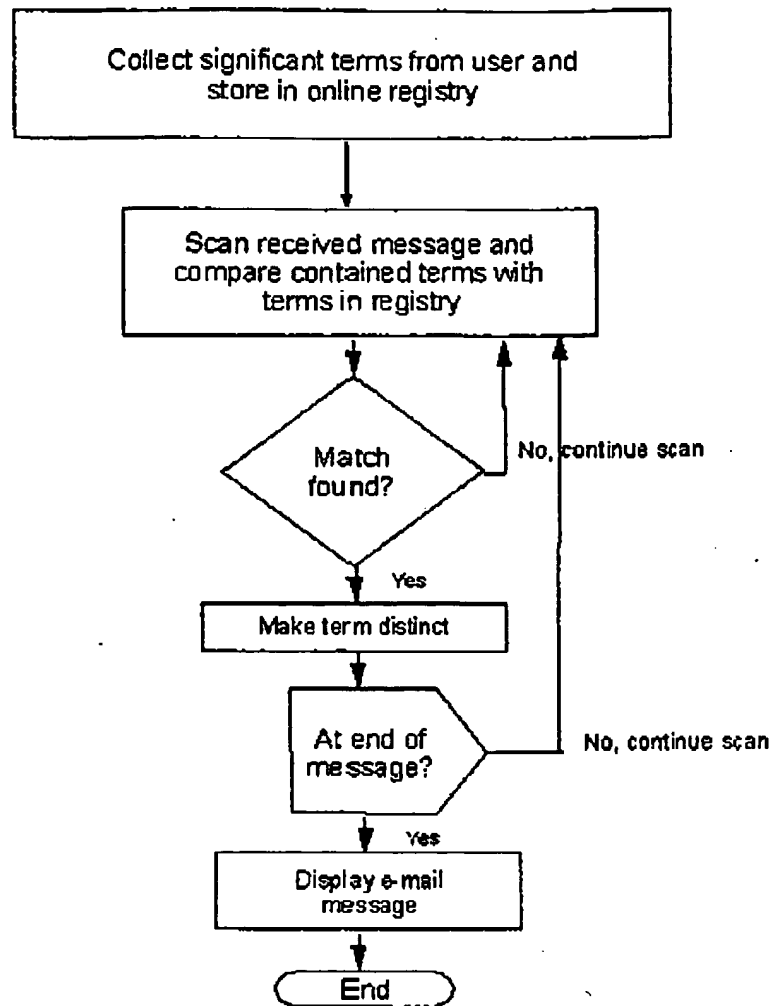


Figure 2, for e-mail recipient:

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Possible embodiments/applications

Here are some examples of how I would use the invention in a product:

Example 1: Embodiments used by Authors of e-mail messages

In the Lotus Notes e-mail product, provide an option off of the Edit menu named: "Collect key names/terms". This option would open a dialog where the user can select, type in, or otherwise specify terms of importance/significance; for example:

- Names of co-workers (could import these from the user's personal address book)
- Key product terms and names ("XYZ product", "Install Team", "Human Resources", etc.)
- Key words used in user's particular field ("XML", "HTML", etc.)

When the user is done in this dialog, a registry of these terms is built and kept on the user's machine.

Provide an option off of the Edit menu named: "Flag key names/terms". This option would be available when the user is composing a new e-mail message. This option would open a dialog similar to the spell-check window where the user can indicate that the embodiment of the invention should go through the e-mail message and flag in turn any term that matches any of the key names/terms that are in the registry collected earlier, or flag any names of people in the To: list that also appear in the body of the message. When a key term is flagged, the user has the option in the dialog of specifying how to indicate that the term is significant; for example, make the term be a different font, make the term be a different color, add an image next to the term, attach a sound file on the term.

At the end of the process, the result is an e-mail message that has terms that are in different fonts and colors that signify to the recipients those places that they should pay attention to. Key names from the To: list are flagged in bright bold red at places where they have actions to do; different colors for some people; bold font for status, install and build. Below, the author choose not to make bold every occurrence of "install" and "build"; just the ones where he thought it would make a difference:

To: Eva Jones, Alan Harmon, Elizabeth Grayson, John Hayes
From: Clark Kent
Subject: To-Dos and brainstorming

- Please send me status on the items below by 11:00, 2:00, 4:00, and 6:00 tomorrow by e-mail. Please include defect number and what happened with it. I'm leaving at 10:30, after 2 meetings and won't have time to stop by and get status. Call me for emergencies.
- We need to have people on call this weekend; please work something out between you; someone will need to check throughout the weekend to make sure further defects are covered and closed.

Elizabeth and Eva: using the Thursday night build, can you test the following defects: 134509, 116916, 116510

Eva: Verify old defects, close. Check with John Hayes which ones were already verified (116916, 116927 were new ones yesterday). Also test fix for 115236 (will need to be in weekend build).

John: Check for new defects, verify, and necessary changes to Eva for fixes. Finish defect 116508.

Alan: Finish defects with Solaris

Later, I think we should discuss this process, in light of the new function updating and roles involved. Perhaps we should really have an install rep as well as a build rep, since we do have a somewhat different perspective on many issues. The install team usually gets hooked in at the end of the cycle, while

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the build team is there from the start. A lot of these problems seem to be related to install.

There may even be other strategically positioned experts who could also help.

Thanks!
Clark

Example 2

Same as above, only this time the author didn't go through with the tool. Instead, at the recipient's end, the recipient collects terms that he or she deems important. Using the above example, if the recipient is Elizabeth, she might just want to see if her name is in the message. She'd see the above incoming message flagged like this (if the author hadn't put highlighting in it):

To: Eva Jones, Alan Harmon, Elizabeth Grayson, John Hayes
From: Clark Kent
Subject: To-Dos and brainstorming

- Please send me status on the items below by 11:00, 2:00, 4:00, and 6:00 tomorrow by e-mail. Please include defect number and what happened with it. I'm leaving at 10:30, after 2 meetings and won't have time to stop by and get status. Call me for emergencies.
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There may even be other strategically positioned experts who could also help.

Thanks!
Clark

So, when Elizabeth opens the e-mail message, her eye would be drawn to the line that begins with her name immediately, and she can read that part first. This ensures that it gets her attention.

3. If the same advantage or problem has been identified by others (inside/outside IBM), how have those others solved it and does your solution differ and why is it better?

I personally try to solve this problem of by making my e-mail messages easy for my recipients to scan by hand. I type the names of people next to the sections or questions in the e-mail message that I want them to especially pay attention to, and then highlighting the names (using different fonts or colors) to call attention to those sections; or by highlighting in color or bold font the sentences or questions that I don't

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want to be missed. The disadvantage to this method is that I have to spend time going to each occurrence within the message, selecting the name or words at each occurrence, and then changing the font or color to make it stand out. This runs the risk of overlooking an occurrence that should be highlighted, especially in a really long e-mail note. See this example:

To: Ellen, Eric, Brian, David
From: Elizabeth
Subject: Question about translation practices

Hi team,

I have a question for you that came from another team. The question is if we use a tool that doesn't generate table of contents automatically, how do the translators "sync up" the translation of the headings? Is there a step in the process where they compare to make sure they've translated the same English heading text into the same language text? Ellen or Eric, do you know how they handle this scenario?

David, from an accuracy/clarity/retrievability standpoint, I always assume that it's in the best interest of the users that the text matches, so that they are ensured that they have jumped to the correct corresponding panel. The example quoted was "Choosing a controller" instead of "Selecting a controller" in the heading of the panel it links to. What are your thoughts on this issue? If you think it's something that could cause a lot of customer problems, then we might need to put a process in place to ensure that they always match exactly. Do you know which team could handle this, Standards or Procedures? Could you call a meeting with the appropriate team to discuss it?

Thanks!
Elizabeth

In the above case, the author has to type the whole message, then go back and choose various fonts and colors and select the text to highlight. The advantages of the invention method over the manual alternative are that this process is made faster and easier to perform. In an embodiment of the invention, the author would only have to type their original message, hit a button, and the tool would pick out the names and, depending on the particular embodiment, could go ahead and make all the names in bold font.

In addition, another advantage with this invention is that e-mail recipients could specify key words that they want to be on the look-out for and have them identified in the e-mail messages that they receive when they open the messages to read them, instead of relying on the author having specified them when the author sent the message. So that, if the author forgets to highlight the name of a recipient in the body of the e-mail message, the recipient could turn on the invention to look for and highlight their name or certain proper names or words that they've specified in a personal "dictionary" and automatically see those words easily.

For example, suppose the above message is sent to Eric, Ellen, Brian, and Dave and the author forgot to run the embodiment of the invention to flag their names:

To: Ellen, Eric, Brian, David
From: Elizabeth
Subject: Question about translation practices

Hi team,

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I have a question for you that came from another team. The question is if we use a tool that doesn't generate table of contents automatically, how do the translators "sync up" the translation of the headings? Is there a step in the process where they compare to make sure they've translated the same English heading text into the same language text? Ellen or Eric, do you know how they handle this scenario?

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Thanks!
Elizabeth

David is the head of the Standards team. With an embodiment of this invention in his e-mail program, he could have registered a set of key words that includes his name ("David"), and the terms "meeting" and "Standards", so that he can easily see his name in any messages that come in and whether there might be an issue for him or his team and for meetings. So, when the message arrives and he opens it, the words "meeting", "Standards" and "David" will be highlighted and he can see them easily with the items that are important for him and his team:

To: Ellen, Eric, Brian, David
From: Elizabeth
Subject: Question about translation practices

Hi team,

I have a question for you that came from another team. The question is if we use a tool that doesn't generate table of contents automatically, how do the translators "sync up" the translation of the headings? Is there a step in the process where they compare to make sure they've translated the same English heading text into the same language text? Ellen or Eric, do you know how they handle this scenario?

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Thanks!
Elizabeth

[REDACTED]

Main idea for disclosure [REDACTED] continued

Possible related art

The existing concept that I believe is most related is that of a spell-checker in an e-mail program. A typical use of a spell-checker is:

1. Author composes the message
2. Author runs spell-check tool
3. Spell-check compares terms in the message against an online registry of terms (the dictionary)
4. One at a time, flags those terms that the spell-check deems important to flag to the user (in this situation, any possibly mis-spelled terms)
5. At each time an occurrence is flagged, gives the user an opportunity to ignore or change the flagged terms
6. At finish, author sends message

My invention extends this concept of comparing terms contained in an authored message to a registry of terms, flagging those of "interest", and giving the author an opportunity to change them by extending it in a new way to solve the problem described above--in an embodiment of my invention:

1. Author composes the message
2. Author runs a tool that is the embodiment of my invention
3. The tool compares terms in the message against an online registry of terms (for example, names of people that the author has registered, names of people in the To: list of the current message, proper names of things in the author's work place, etc.) that the author has created
4. One at a time, the tool flags those terms that match ones in the registry that the author has created (and, in doing so, has indicated that the author deems significant terms)
5. At each time, gives the author an opportunity to specify that the term be given some quality (for example, a different font, or a color, or a sound attached, or an image attached) to indicate its importance when the message is opened by the recipient.
6. At finish, author sends message

Where the embodiment of my invention is different than a simple spell-checker is that:

- a) It uses a registry that the users define themselves with words that are of personal importance
- b) A spell-checker is based on the paradigm of flagging those terms that don't match its registry. My invention flags those terms that do match.
- b) The author can attach significance to the terms that are flagged. Spell-checkers only let you change/replace the flagged term.

Another existing concept that I believe might be related is the search feature in e-mail programs. The concept of search for the recipient of the e-mail is:

1. Recipient receives e-mail message

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2. Recipient opens search tool
3. Recipient specifies significant words that he or she wants to find within the message
4. At each occurrence, recipient reads that section.

My invention extends this concept in a new way by searching through an e-mail message for any term that the user (author or recipient) has specified ahead of time as having significance or importance for them, not just searching for a single term that the user enters in the search tool, and by allowing the occurrences of terms to be flagged in some way within the e-mail itself. If the author uses an embodiment of my invention, the recipient does not have to do any searching at all—all of the important terms will be flagged with some significance (font, color, image, sound, etc.) that is readily visible to the recipient. In addition, if the recipient uses an embodiment of my invention instead of the search tool, my invention is not as tedious as the search tool. Instead of having to run the search for every term that has significance for the recipient and that he or she thinks might be in the e-mail message (for example, search on "my name", then search on "my product name", etc.), with the embodiment of my invention, the recipient sets up a registry of terms at one point in time and then only runs my invention against each e-mail message. Each occurrence is flagged (by font, color, image, sound, etc.) and the recipient can see them stand out within the e-mail message.

Detectability

The use of this invention in another e-mail product could be detected by:

1. Opening the product and create a new message
2. Type text into the body of the message
3. Go to the area of the product where the spell-checker and other textual tools are (for example, grammar tool) and see if there are any tools that you can use to go through the document and provide "significance" to terms via font change, color, images, sound, etc.
4. Go into the online help for the e-mail product and do a search on tasks like "flagging importance", "indicating importance" and see if there is any mention of such a concept in the online help for the product.

Importance to IBM

I believe that an embodiment of my invention could be added to Lotus Notes, which is an IBM product. It would save time for any user of Lotus Notes, and having the function might end up being a competitive advantage. I use Notes myself, as do my co-workers, and today we are each solving this problem manually by flagging names and terms within our messages using fonts and color. With a tool that does the same thing, we would individually save lots of time. I would imagine that users of other e-mail programs would like to have this function as well.

In addition, companies that make and market e-mail programs might want to license this patent to implement features based on it in their programs. Popular e-mail programs include Eudora, Microsoft Outlook, Netscape Messenger.

Disadvantages

The only disadvantage I can think of at this time is that it would be so easy to use that users of this invention might overdo it and make so many terms in their e-mail messages distinct that it makes the messages hard to read. However, this is a trade off that comes with the ease of use and capability of the invention (similar to when people could first add different fonts to their messages and they'd put in too many in one message).

4. If the invention is implemented in a product or prototype, include technical details, purpose, disclosure details to others and the date of that implementation.
This is not implemented in a product yet.